AUSTROCAECILIUS, A NEW GENUS OF CAECILIIDAE (PSOCOPTERA) FROM AUSTRALIA

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Abstract

A new genus *Austrocaecilius*, is described from Muogamarra Nature Reserve, near Sydney. It is related to *Caecilius* Curtis, but has several morphological peculiarities in the terminal structures of the abdomen of the female.

Introduction

Material collected during a study of the Psocoptera of Muogamarra Nature Reserve, near Sydney, New South Wales, included a single female previously referred to as "? Caeciliid gen. et sp. n." (Smithers 1977). As the slide preparation of the specimen was not satisfactory the species was not described; repeated attempts to obtain more material have failed. Remounting the specimen has resulted in a more satisfactory slide and it has been decided to proceed with the description of this specimen which represents an interesting new genus and species.

Austrocaecilius gen. nov.

Belonging to the Caeciliidae (*sensu* Mockford 1978) with the following combination of features: Antero-lateral setae of labrum a little heavier than others; mandibles elongate; fore wing setae short, in one row on veins; wing membrane not setose; anterior labial sensilla absent; female subgenital plate with exceptionally well developed lateral apophyses; clypeal shelf very narrow; labral stylets present; lacinial tip broad; no sclerotized ridges across labrum; no preapical tooth on claws; ventral and dorsal valves of gonapophyses long and pointed; external valve well developed, elongate, strongly sclerotized, without setae; glandular area on spermathecal duct very long, along almost whole length of duct.

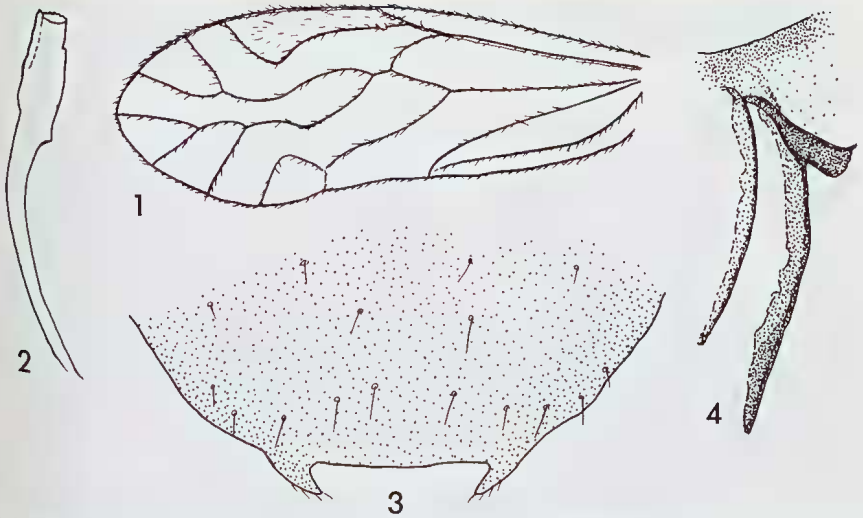
Type species: *Austrocaecilius alettae* sp. n.

Austrocaecilius alettae sp. n.

FEMALE

Coloration (in alcohol). Head brown, shiny. Median epicranial suture dark brown. Antennae pale brown. Eyes black. Maxillary palps very pale brown, apex of fourth segment a little darker. Thoracic nota brown, shiny, the area where the lateral lobes of the mesothorax meet a little paler so that the thorax appears to have a small pale patch in the middle when seen from above. Legs pale brown. Fore wings (Fig. 1) hyaline, tinged with brown but slightly paler in middle of cell R_5, at Cu_{1a} and at nodulus. Veins brown. Hind wing hyaline, slightly tinged with brown; veins brown. Abdomen pale brown.

Morphology. Length of body: 2.1 mm. Median epicranial suture very distinct. Head with short but fairly dense pubescence, even on genae. Postclypeus fairly bulbous. Length of flagellar segments: f_1: 0.52 mm; f_2: 0.38 mm;



Figs 1-4. *Austrocaecilius* **gen. nov. et sp. n.** (1) ♀ fore wing; (2) ♀ lacinia; (3) ♀ subgenital plate; (4) ♀ gonapophyses.

second segment relatively short. Antennae shorter than fore wings. Eyes fairly large, almost reaching level of vertex. IO/D (Badonnel): 1.9; PO: 0.77. Ocelli of almost equal size but fairly small. Lacinia (Fig. 2). Trochanters and femora with fine long setae. Measurements of hind leg: F: 0.59 mm; T: 1.0 mm; t_1: 0.31 mm; t_2: 0.13 mm; rt: 2.4 : 1; ct: 19, 0. Hind tibiae a little broadened distally. Fore wing length: 2.8 mm; width: 1.2 mm. Costa broadened in pterostigma and towards wing apex. Pterostigma with posterior angle, with concave hind margin. Rs and M strongly sinuous before bifurcation. Areola postica fairly tall, reaching more than halfway to M. Cu_1 slightly sinuous, Cu_2 setose. Hind wing length: 2.2 mm; width: 0.8 mm. Venation and setae as usual in *Caecilius* Curtis. Epiproct simple, rounded behind, with a few scattered setae. Paraproct with large field of trichobothria and a few scattered setae near hind margin. Marginal cone and seta apparently absent. Subgenital plate (Fig. 3) lightly sclerotized with lobe at each end of the hind margin between which the margin is slightly curved outwards; each lobe with a few small setae on outer margin near end. Gonapophyses (Fig. 4) with three valves; ventral and dorsal valves long, ending in a blunt point; external valve well sclerotized, developed into a curved, distally broadened plate ending in a small pointed extension of the dorsal border; the basal attachment of the gonapophyses well sclerotized. Glandular tissue along spermathecal duct extends almost whole length of duct.

MATERIAL EXAMINED. NEW SOUTH WALES: 1♀ (holotype) Muogamarra Nature Reserve, 23.v.1973 (C. N. and A. S. Smithers) (Australian Museum collection). [This specimen previously referred to as "? Caeciliid gen. nov. et sp. n." (Smithers 1977)].

This species is named for my wife in appreciation of her assistance i the field over many years.

Discussion

Mockford (1976) has discussed the four groups of families traditionall recognized in the suborder Psocomorpha and summarized their characteristics *Austrocaecilius* clearly belongs to the group Caecilietae established by Pearma (1936) for a large number of species which show considerable morphologica similarity. Within the Caecilietae Mockford (*loc. cit.*) established two super families, the Asiopsocoidea and the Caecilioidea. In the former superfamil he included only *Asiopsocus* Gunther and *Notiospocus* Banks (both in th Asiopsocidae) placing all other genera of the Caecilietae in the Caecilioide that is, all genera previously placed in the Caeciliidae, Stenopsocidae, Amphi psocidae and Polypsocidae. Later (Mockford 1978) he discussed reasons fo considerable rearrangement of these genera, set out a classification of reconstituted Amphipsocidae and established the characters of that family the Caeciliidae, and an additional family, not yet named, based on his "Genu IX". He did not discuss the fate of those genera of the Caecilioidea which he did not include in these three families, but by inference they are place in his Caeciliidae.

Austrocaecilius agrees with several characters of his unnamed family bu differs in having a well developed, sclerotized external gonapophysis valve It conforms to his characterization of the Caeciliidae but not Amphipsocidae. Only in the female genitalia is there some resemblance to the amphipsocid genera *Dasydemella* Enderlein and *Matsumuraiella* Enderlein in that both have a fairly well developed external valve but as well as differing in most features listed by Mockford (1978) they also differ in having the setae on the fore wing veins in two rows (one in Caeciliidae and *Austrocaecilius*). Also, in contrast to *Austrocaecilius, Matsumuraiella* has setae on the fore wing membrane as well as on the veins and wing margin. *Austrocaecilius* should be placed in the Caeciliidae.

Within that family the extent of the very well developed lateral apophyses of the subgenital plate, carrying setae, and the well developed external valve of the gonapophyses are seen in no other described genus.

Acknowledgements

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References

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